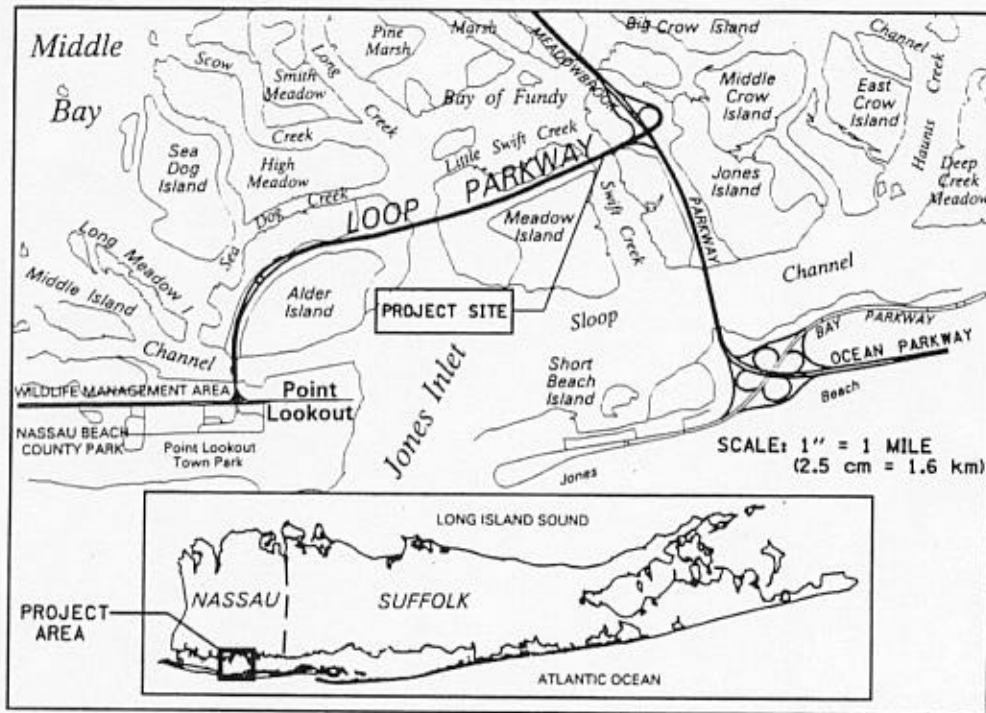


## Loop Parkway over Swift Creek Bridge Replacement Town of Hempstead, Nassau County, New York

The New York State Department of Transportation (NYSDOT) replaced the bridge which carries Loop Parkway over Swift Creek in the Town of Hempstead, New York. The project construction was completed in 1999 and it took two years with a cost of about \$21 million.



Loop Parkway was reconstructed within the project limits with a new alignment over Swift Creek. Safety improvements were made on the ramps connecting Loop Parkway and Meadowbrook Parkway. Under this project the environment was protected and enhanced. The public was provided with the opportunity to make comments and be involved in the design of project. In addition, coordination among numerous resource protection agencies was established and enhanced to do this type of major infrastructure improvement project. A mutual understanding of each agency's role and requirements was achieved through an extensive coordination process and by communicating with the various agency positions involved. This improved process will lead to stream-lined design efforts and overall better projects that maximize transportation safety and efficiency while reducing adverse effects on natural and cultural resources. Similar procedures are currently in use on another parkway bridge replacement project in Nassau County, New York.

The State Historic and Preservation Office (SHPO) has designated Loop Parkway as one of five parkways on Long Island eligible for inclusion in the National Register of Historic Places. This bridge

replacement project was designed considering the unique historic nature of the Loop Parkway, tidal wetlands surrounding the project site, coastal zone issues, hurricane evacuation routing, local beaches and boating in the area. An Environmental Assessment Report was prepared to document and discuss in detail all proposed features and their impacts on the environment. This report was utilized to introduce, inform and familiarize the project to the public and agencies involved with the final approval of the project. These agencies included the Federal Highway Administration, US Coast Guard, US Army Corps of Engineers (USCOE), US Fish and Wildlife Service (USFWS), US Environmental Protection Agency, NYS Department of State, NYS Division of Budget, NYS Department of Environmental Conservation (NYSDEC), SHPO, NYS State Office of Parks, Recreation and Preservation, Nassau County, Town of Hempstead, City of Long Beach, local fire districts, Long Island Power Authority, Long Island Regional Planning Board and many others. In the final design and construction of this project a compromise was reached and NYSDOT was able to accommodate the interests and concerns of all involved agencies.

The new bridge alignment and Loop Parkway/Meadowbrook Parkway ramp impacted approximately one-half acre of tidal wetland around Swift Creek. The realignment of the eastbound Loop Parkway to northbound Meadowbrook Parkway ramp was a high accident location due to its poor alignment.

Environmental and wetland impacts were minimized at the bridge by installing a marine steel sheet piling apron wall on the south side of the bridge approaches. The proposed alternative for the eastbound Loop Parkway to northbound Meadowbrook Parkway ramp was chosen from six alternatives. This alignment minimized wetland and wildlife habitat impacts, while satisfying the SHPO concerns and meeting safety standards. The wetland impacts along this ramp were further reduced by constructing a Geosynthetic Reinforced Earth System (GRES) vertical wall. Several wetlands mitigation schemes were analyzed by NYSDOT, the USCOE, NYSDEC and USFWS. The chosen mitigation plan replaced disturbed tidal wetlands at a 2:1 ratio. This plan was a tidal wetland restoration alternative which included excavation of an existing upland area and connection to tidal waters through extended channels. The restored marsh was planted with native wetland plant species. In addition, the project eliminated all direct stormwater discharges into tidal wetlands by altering drainage flow to the upland median between ramps.

SHPO reviewed this project for any adverse effect on the historic integrity of the parkway in accordance with Section 106 of the National Historic Preservation Act. The Federal Highway Administration's (FHWA) Advisory Council on Historic Preservation (ACHP) also reviewed this project in accordance with their regulations 36 CFR-Part 800.5 "Protection of Historic Properties." The NYSDOT needed a "No Adverse Effect" determination from SHPO and concurrence from the FHWA's ACHP to progress this bridge replacement project. In order to receive this determination, the bridge over Swift Creek was designed to be replaced with a similar bridge. The widening of bridge over Meadowbrook State Parkway bridge was performed without altering the historic nature of the bridge. To achieve this, the old facing stones were removed and reused to maintain the character of the original bridge.